Chapter 2 :
Standard Form

Unit Title: Futurama

Unit Question: Where am I Going?

Learner Profile: Reflective

Area of Interaction:
Health & Social Education

I Can Statement:

I can put a linear equation into Standard Form and find multiple ways to graph it.

Vocabulary

Standard Form

Writing a Equation in Standard Form

$$Ax \pm By = \pm C$$

Rules for Standard form:

1. A and B are not both Zero
2. A is nonnegative
3. A, B, and C are integers whose GCF is 1

Let's apply the rules!!!

Writing a Equation in Standard Form

Is this equation in $Ax \pm By = \pm C$

$$y = 2x - 10$$

$$-2x \quad -2x$$

$$-2x + y = -10$$

$$2x - y = 10$$

Rules for Standard form:

1. A and B are not both Zero
2. A is nonnegative
3. A, B, and C are integers whose GCF is 1

Writing a Equation in Standard Form

Is this equation in $Ax \pm By = \pm C$

$$y - 5 = 4x + 8$$

$$-4x \quad -4x$$

$$-4x + y - 5 = 8$$

$$+5 \quad +5$$

$$-4x + y = 13$$

$$4x - y = -13$$

Rules for Standard form:

1. A and B are not both Zero
2. A is nonnegative
3. A, B, and C are integers whose GCF is 1

Writing a Equation in Standard Form

Is this equation in $Ax \pm B = \pm C$

$$4\left(y + 5\right) = 4\left(-\frac{5}{4}(x - 2)\right)$$

$$4y + 20 = -5(x - 2)$$

$$4y + 20 = -5x + 10$$

$$+5x \quad -20 \quad +5x \quad -20$$

$$5x + 4y = -10$$

Rules for Standard form:

1. A and B are not both Zero
2. A is nonnegative
3. A, B, and C are integers whose GCF is 1

Writing a Equation in Standard Form

Is this equation in $Ax \pm B = \pm C$

You Try ⟶ $y + 3 = -\frac{3}{4}x - 3$

Rules for Standard form:

1. A and B are not both Zero
2. A is nonnegative
3. A, B, and C are integers whose GCF is 1

Writing a Equation in Standard Form

Is this equation in Ax ± B = ± C

-2x + 3y = -6

No = 2x − 3y = 6

−2x −2x

Slope int $\frac{-3y}{-3} = \frac{-2x+6}{-3}$ $y = \frac{2}{3}x + -2$

Now, How would you graph this equation?

1 solution: Solve for y, then graph the y-intercept, use slope to come up with 2 point.

2 solution: Find the x-intercept, then the y-intercept. Graph the intercepts.

$-2x + 3y = -6$

x	y
0	-2
3	0

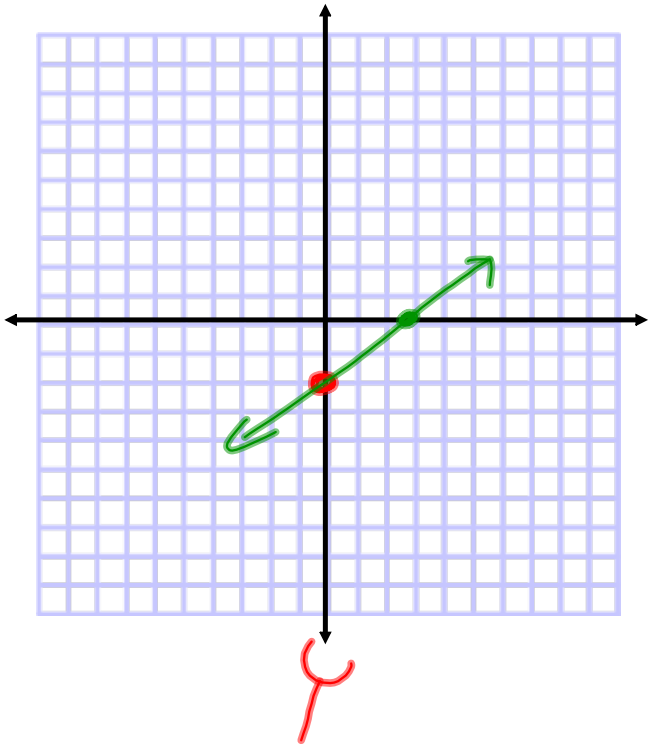
y-int

$-2 \cdot 0 + 3y = -6$

$0 \quad 3y = -6$

$-2x + 3 \cdot 0 = -6$

$-2x = -6$



Graph a linear equation in standard form

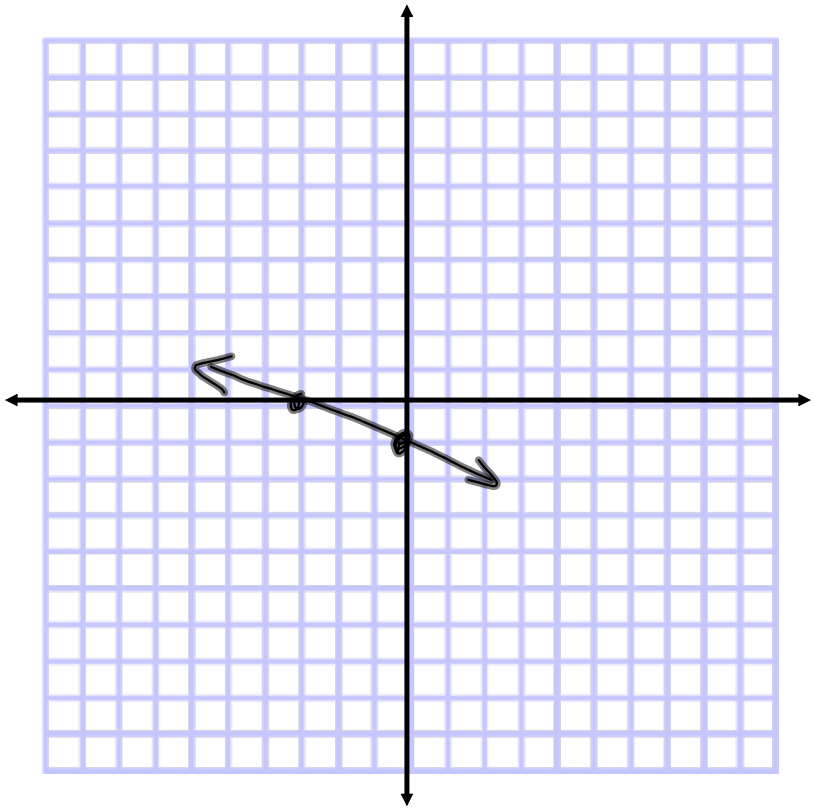
$x + 3y = -3$

Use intercepts

x-intercept?

x	y
0	-1
-3	0

y-intercept?



Assignment:

Pages 72-73

#5-13, 16, 24

not 9,10

Due tomorrow at the beginning of class.